

Translations

Published for Employees of the National Cancer Institute, Division of Clinical Sciences

WINTER 2000

Ireland-Northern Ireland-NCI Cancer Consortium Established

On Sunday, October 3, 1999, the National Cancer Institute entered into an historic agreement with the Republic of Ireland and Northern Ireland to enhance clinical services, improve patient care, promote North-South collaboration in cancer research and development, and cement a strategic alliance between Ireland and the United States. Hundreds gathered at the Stormont Parliament Buildings in Belfast, Northern Ireland, including political representatives, physicians, scientific researchers, and research nurses, to witness the signing of the Memorandum of Understanding, the agreement that officially established an Ireland-Northern Ireland-NCI Cancer Consortium.

Before the signing of the agreement, attendees heard remarks from distinguished

continued on page 3

FOCUS: LANCE LIOTTA, M.D.,PH.D.

The DCS Pathology Lab Plays Key Role in the Cancer Genome Anatomy Project

In the last two decades, scientists have learned that genetic changes lie at the root of all cancers. The Cancer Genome Anatomy Project (CGAP) is an interdisciplinary, multi-Institute program to establish the information and technological tools needed to decipher the molecular anatomy of the cancer cell. CGAP unites the newest technologies, along with those both cost-effective and capable of high throughput, to identify all the genes responsible for the establishment and growth of cancer. CGAP's goal is to achieve a comprehensive molecular characterization of normal, precancerous, and malignant cells.

Members of the Division of Clinical Sciences (DCS) Pathology Branch, led by Chief Lance Liotta, M.D., Ph.D., are studying the molecular changes during the evolution of cancer in actual human tissue.

"We have learned a lot about the development of cancer from animal models and cultured cells," says Dr. Liotta. "The real goal is to understand the human being. What molecular events are driving the development of early-stage cancer and what causes the transition from nonlethal, noninvasive cancer to invasive, metastatic cancer?"

continued on page 2

IN THIS ISSUE

DNA MICROARRAY FACILITY, 6

PARTNERSHIPS IN SCIENCE, 7

TELESYNERGY, 7

STEVEN ROSENBERG, 8

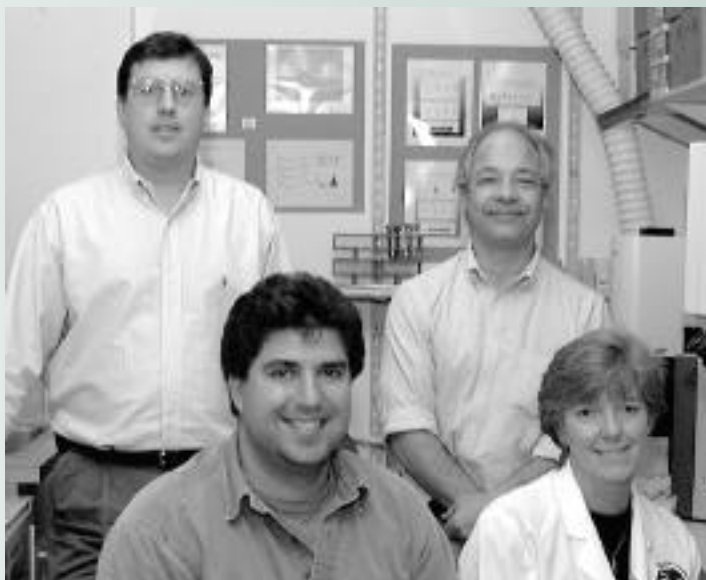
ANDREW BLAUVELT, 9

NEW EMPLOYEES, 10

RESEARCH NURSE PROGRAM, 11

DCS WEB SITE, 11

CSSC, 12



Key members of the DCS CGAP team: Michael Emmert-Buck, M.D., Ph.D., Emmanuel Petricoin, Ph.D., Lance Liotta, M.D., Ph.D., and Lu Charboneau.

The transition from a pre-malignant, non-life-threatening lesion to a life-threatening lesion can take 5, 10, or even 20 years. Currently, there is no good animal model to evaluate what occurs during this transition phase.

“We want to understand which molecules are responsible for this transition or are at least markers for the occurrence,” Dr. Liotta adds. “As we identify these markers, they can provide new approaches for functional analysis, intervention, prevention, and early detection.”

To date, researchers have been limited to analyzing heterogeneous tissue samples using cDNA arrays. Through this analysis, in which the tissue is ground up, they learned very little about the specific disease subpopulation because within one tissue sample there are often normal cells, early-stage cancer cells, and late-stage cancer cells.

To analyze the early stage cancer cells, Dr. Liotta’s lab created a new technology, laser capture microdissection (LCM), that allows pathologists to look under the microscope and remove specific microscopic regions of cells from a tissue sample. This was the first time that tissue cells could be analyzed at the molecular level. In late 1996, Emmert-Buck et al published their findings on

this new technology in *Science*. The next year (Bonner et al *Science* 1997) this technology was commercialized through a Cooperative Research and Development Agreement (CRADA) with Arcturus Engineering Inc. (through the engineering efforts of Robert Bonner, Ph.D., of the National Institute of Child Health and Human Development, and Dr. Thomas Baer of Arcturus) and is now in use in hundreds of labs throughout the world.

Lu Charboneau, MT(ASCP)SH, runs the NCI’s core LCM facility, located in Building 10, which has three LCM units. Hundreds of doctors from throughout the world have received training in this facility, and a working group of intramural and extramural investigators convenes annually to discuss the use and further development of this technology. “We’re proud to see the help we provide here become an integral part of research in many academic and industrial labs,” says Ms. Charboneau.

“Our goal with LCM is to be able to take a biopsy from a patient and microdissect the normal-appearing epithelium, the premalignant lesions, and even cancer if it’s present, and then apply that knowledge to some kind of analysis tool to look at the proteins of the genes,” says Dr. Liotta. “We could then determine

whether this patient has a high risk of cancer developing, or a slow growing, benign tumor, or possibly a tumor that would be susceptible to a specific drug. This is our dream—to tailor the pathology of a patient’s tissue cells to his or her prognosis and treatment. And, to find the molecules causing change in order to develop new drugs.”

One key component of realizing the dream are cDNA libraries. By taking the RNA of the genes that are expressed in a cell type and turning it into individual clones. The clones sit in a bacterial colony and there are 2 to 3 million colonies in this library. Each clone has a different piece of DNA, and that DNA represents one gene that was expressed in that cell. The clones can then be sequenced randomly, and the genes that are expressed in that cell can be determined.

“Out of 100,000 or so genes in the human genome, only 10,000 to 20,000 are expressed at any one time in any one cell type,” notes David Krizman, M.D., who develops the cDNA libraries in the intramural NCI CGAP effort. “Consequently, it’s important to determine what genes are being expressed in which cell types.”

To date, Dr. Krizman has created 15 to 20 cDNA libraries from prostate cancer progression, four normal

continued on page 4

political and medical representatives from each partner. Representing NIH were Director Harold Varmus, M.D., NCI Director Richard Klausner, M.D., and DCS Director Edison Liu, M.D. Representing Northern Ireland were Chief Medical Officer Henrietta Campbell and Parliamentary Undersecretary of State George Howarth. Representing the Republic of Ireland were Chief Medical Officer James Kiely and Minister for Health and Children Brian Cowan.

“Researchers of all three countries will be participating in what increasingly has become a global rather than a national quest to cure cancer,” said Donna Shalala, Secretary, U.S. Department of Health and Human Services, in remarks delivered by Dr. Varmus.

U.S. Senator Connie Mack of Florida and former U.S. Senate Majority Leader and honorary chancellor of the Queen’s University of Belfast George Mitchell, also attended to lend their support to this unique, mutually beneficial collaboration.

“There is the potential for this work to bring both parts of Ireland together to actively participate in a common cause that has the potential to benefit people across the social spectrum,” said Senator Mitchell.

Cancer incidence rates in Ireland are the highest in the Western world. “In Belfast, 67,000 people have died from cancer in the last 25 years—20 times the number of those killed as a result of

sentations. More than 600 physicians, researchers, nurses, and industry representatives participated in the conference to define the current scope of research and care provided in their



the Troubles.” said Mr. Howarth. “The Memorandum of Understanding gives us fresh hope that together we can make significant progress in the fight against cancer.”

The signing ceremony launched the 3-day NCI All Ireland Cancer Conference that featured more than 80 speakers from the United States, Northern Ireland, the Republic of Ireland, and the United Kingdom. The Irish print and broadcast media provided extensive coverage of the conference, including special reports on key pre-

sentations, share research findings, and suggest areas in which collaboration would be beneficial.

“Despite the reality of globalization, most of us and our now 6 billion co-inhabitants live out our lives in small, local communities with distinct resources, experiences, and environments,” said Dr. Klausner. “The content of this agreement that we just signed is about the development and application of science to the individual and local experience of cancer... The great mysteries of cancer not only play out locally

Ireland-Northern Ireland-NCI Cancer Consortium members sign the Memorandum of Understanding. Front row, from left: Mr. Cowan, Mr. Howarth, and Dr. Klausner. Back row, from left: Dr. Liu, Dr. Campbell, Sen. Mitchell, Dr. Varmus, and Dr. Kiely.

but are revealed locally. It is in the sharing of local experiences that the blueprints for change are best worked out.”

Working groups in the areas of cancer registries and epidemiology, education/training and scholar exchange, and informatics and telecommunications were formed on the final day of the conference. These three groups will take the lead in implementing specific tripartite programs that will enhance clinical research in cancer. Projects being discussed include the publication of an All-Ireland Cancer Registry report in 2000 showing cancer trends in both the North and the South, formalized scholar exchanges between Irish and U.S. clinical investigators, and the development of an Irish Clinical Trials Group that engages clinical researchers from both the North and the South. The latter will be linked using advanced information systems and telecommunications platforms formulated at the NCI-DCS.

“The origins of this tripartite agreement can be traced to personal relations between clinical investigators in the DCS and Ireland—some of whom spent time at the NCI,” said Dr. Liu. “All parties involved in this Consortium are eager to seize this opportunity to build core expertise, enhance scientific

interchange, and establish critical clinical research infrastructures.”

Building on this momentum, the principals from the United States, Northern Ireland, and the Republic of Ireland will meet to form a board of directors. The meeting has been tentatively set for February 16, 2000. ■

FOCUS
continued from page 2

cDNA libraries, and three preneoplastic lesion (PIN) libraries. This is the first time anyone has looked at normal, early, and end-stage genes in actual human tissue.

Dr. Krizman compares genes expressed in non-cancer cells to genes expressed in cancer cells. “We have found 944 differentially expressed genes—any one could be a marker for cancer detection, such as prostate specific antigen (PSA),” says Dr. Krizman. “We have two libraries from metastases—one from bone and one from liver. Between invasive and metastases, there are 355 differentially expressed genes. Our task is to determine which of the differences are important.”

**Gene Expression
Profiling Leads to Gene
Discovery**

In 1991, the scientific community thought it would be valuable to concentrate on finding genes (rather than their sequence). Approximately 47,000

genes were found before CGAP began. CGAP started its gene discovery efforts in late 1996 and has since taken over the entire public gene discovery effort. To date, approximately 78,000 genes have been found (more than 30,000 genes were discovered by the NCI). As genes are being sequenced, new genes are being discovered.

Each of the approximately 100,000 genes encodes a separate single protein, and these proteins do all of the work of the cells. Due to technological limitations, no one has been able to study the proteins in the tissue. The Food and Drug Administration (FDA) and NCI have embarked on a joint initiative called tissue proteomics to look at proteins that are associated with cancer.

Emanuel Petricoin, Ph.D, senior investigator, FDA, who works with Dr. Liotta, notes that, “Many genes are transcribed but not translated into proteins. Given that 90 to 95 percent of all therapies and diagnostics are protein based, what we really want to study are the proteins.”

Proteomics is identifying, characterizing, separating, and analyzing the proteins expressed by genome at any given place and time in any given cell type.

“If we can learn how the cell is changing at the protein level, we can then mod-

ify the proteins in very different ways,” says Dr. Petricoin. “First, we need to know the status of the proteins and their context.”

Proteins don’t act alone; they have to find a substrate (partner) to perform their activity. Accordingly, Dr. Petricoin is looking at the functional status of proteins (are they there or not?) and whether they have been modified.

Signal transduction pathways control what other proteins do. Dr. Petricoin hopes to learn which proteins are present due to cancer and which may be missing as a consequence or cause of the disease.

How Does Proteomics Work?

Historically, after a cell was blown apart, it could be arrayed by separating proteins in a gel. This two-dimensional gel electrophoresis separated the proteins by two parameters—mass (weight) and charge (acidic, basic). This process provided a way to start identifying proteins and sequence them (based on amino acid sequence). Next, drugs could potentially be developed that could bind to a western blot. This extremely labor-intensive process proved frustrating given the vast number of proteins.

Research has shown that there are other proteins that are just as abundant as PSA (currently the most widely

used marker for prostate cancer detection). One of these other proteins may be an even better marker. NCI currently has 65 prostate cell lines to use in drug development (they are dramatically different from what is seen in actual prostate cells—only 25 percent are the same).

The latest technology in use is surface enhanced laser deabsorption and ionization (SELDI). With SELDI, a cell can be blown apart much more quickly. Instead of western blot, molecules can be baited to attract proteins to a specific surface. Once the proteins are bound, the unbound proteins can be washed away. The subset of proteins that are left share a similar structure (acidic, basic, etc.). Then, the proteins’ speed can be measured and transferred into weight with the laser.

When normal cells are compared with PIN cells, a reproducible shift in the protein fingerprint is visible. This is the first insight into the protein complement of cancer cells. SELDI provides the first application of the analysis of the protein fingerprints from pure subpopulations of human cancer cells. “Preinvasive cancer lesions are often microscopic and require a high sensitivity method for analysis,” says Dr. Petricoin. “They can be seen only by using SELDI. Our ultimate goal is to assign a protein code to a cell. Then we can determine prognosis and treatment.”

Providing the Research Community with Access to Tissue Samples

Michael Emmert-Buck, M.D., Ph.D., coordinates NCI’s CGAP effort with Robert Strausberg, Ph.D., in the NCI Director’s office and with scientists at the National Center for Biotechnology Information’s Advanced Technology Center.

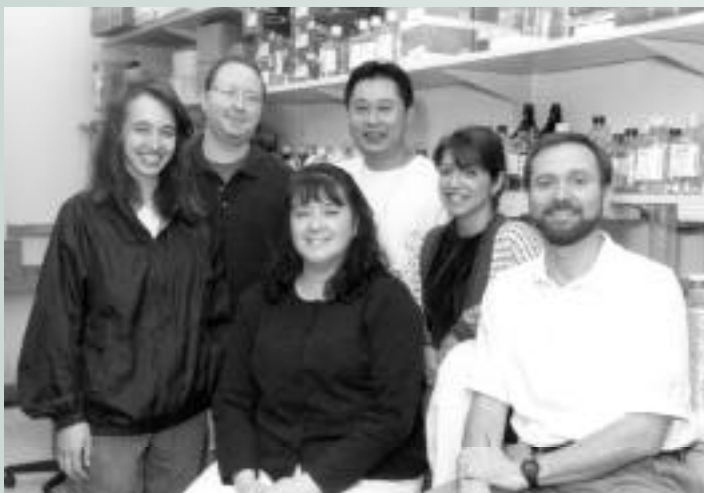
“Because tumors express a lot of different genes they are good tools for gene discovery,” explains Dr. Emmert-Buck. “Currently, there are approximately 150 libraries of different tumors (available on the Web).”

Dr. Emmert-Buck manages the CGAP Web site at www.ncbi.nlm.nih.gov/CGAP. This site includes the following links: human tumor gene index, molecular fingerprinting, cancer chromosome aberration project, genetic annotation initiative, and mouse tumor gene index. Because many basic researchers don’t have access to human tissue samples, CGAP wants to ensure that new information can be accessed via the Internet. For example, if a researcher who has a gene of interest in a hot spot in the human genome can go into the mouse project section of the CGAP site and look for genes that are similar in sequence or map to a homologous location in the mouse genome.

As Dr. Liotta’s group continues to discover human genes and proteins, the tasks

NCI Launches One of the First DNA Microarray Laboratories

In April, the National Cancer Institute launched the services of its new DNA microarray facility. Located in Gaithersburg, the new laboratory uses cutting-edge technology to quickly produce a picture of the genes that are active in a tumor cell. The NCI laboratory is 1 of just 10 and the only



Lance Miller (far right) and members of the DNA microarray facility.

government facility to provide this bold, new technology in the Nation.

“We are ahead of the game at this point,” says Lance Miller, biologist and laboratory head. “For the first time, we are able to look deep into transcriptional programs that underlay biological states and processes. This approach promises to improve the diagnosis and treatment of cancer and other diseases. Our team is committed to advancing both the technology and access to it.”

DNA microarray technology is a powerful, but technically challenging, new

research tool that allows scientists to assess the level of expression of a large subset of the 100,000 human genes in a cell or tissue. The new facility will offer support to members of the NCI intramural and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) communities who study the molecular causes of cancer.

“This technology provides critical information in narrowing the precise molecular causes of cancer,” says DCS Director Edison Liu, M.D. “Before its implementation, the prevailing technology could only analyze a few gene expressions. Now we can study thousands at a time. A local lab with this type of technological capability will go a long way in helping our scientists succeed in their vital clinical endeavors.”

To access the lab’s services, NCI and NIDDK researchers must complete a 2-day training session at the laboratory. To register for one of the sessions (held twice a month) or request other information, please send an e-mail message to nciarays-r@mail.nih.gov.

“The training sessions empower the users to better utilize the technology and their time in the lab,” says Mr. Miller. “It is one of our primary goals to make our

services as user-friendly as possible and specific to everyone’s needs.”

A Web site

<http://www.nciarray.nci.nih.gov> is under construction, and an array database complete with analytical tools is available to those who have completed the training ■

FOCUS
continued from page 5

of preventing, detecting, and treating cancer appear to grow more complex.

However, step by step they are providing critical pieces that researchers can jointly use to solve this most perplexing puzzle. ■

Partnerships in Science™ Extends Research Participation Beyond NIH Campus

The Partnerships in Science™ pilot program, sponsored by the DCS, is a national and international program “without walls.” Through this program, the NCI exercises its role as a national and international oncology resource, facilitator, collaborator, and educator in clinical, translational, and laboratory research through partnership agreements with committed and dedicated health care institutions.

Institutions that participate in the Partnerships in Science™ program must demonstrate a commitment to advancing knowledge in the field of cancer research and treatment through active participation in NCI-initiated research and education. Program participants must also be involved in the development and implementation of new techniques and procedures through their participation in the approved DCS protocols.

“The ultimate goal is to answer key research questions by accruing patients on NCI’s intramural protocols in a more expeditious manner, ultimately improving patient treatment outcomes,” says Frank Govern, Ph.D., Deputy Chief, Radiation Oncology Sciences Program. “The program is designed to foster a high level of synergy and creativity. It is also

anticipated that there will be increased cross-fertilization of teaching, education, and sharing of new and innovative ideas. These partnerships will help the NCI determine the future direction of clinical oncology.”

Key mechanisms for interaction between the Partnerships in Science™

research nurses and data managers; facilitated patient transfer procedures to NCI for protocol participation; participation in appropriate Phase I, Phase II, and selected Phase III protocols at the Partners’ institutions; mutual rotation of research fellows, board certified/eligible oncology physicians, and other staff through dis-

“Along with facilitating the accrual of patients to NCI protocols, this program will bring greater recognition of the value and uniqueness of the NCI—not only to the professionals involved but also to the many oncology patients whom this program will benefit,” adds Dr. Govern. ■

TELESYNERGY™ Demonstrated at NCI All Ireland Cancer Conference

The TELESYNERGY™ Medical Consultation WorkStation, which was developed within the Computational Bioscience and Engineering Laboratory, Division of Cancer Biology (DCB), over the past 4 years, was sent to Belfast, Northern Ireland, for a temporary demonstration of its power as an enabler for inter-continental, multimedia medical consultation during the NCI All Ireland Cancer Conference.

Dr. Robert Martino, Kenneth Kempner, and David Chow installed and demonstrated the TELESYNERGY™ platform for conference participants. Mr. Kempner also provided an introduction to the TELESYNERGY™ environment as part of a formal presentation he made at the conference. Together the group explored collaborative opportunities with several computer science and engineering schools in the Belfast area.

Dr. Frank Govern, of NCI, Center for Information Technology’s principal collaborator for the TELESYNERGY™ project and director of the NCI “Partnership in Science” outreach program, was at the demonstration site during most of the 3-day conference. At a working group meeting on the last day of the conference, it was proposed that 1 TELESYNERGY™ system be permanently installed in Belfast and another in Dublin, Republic of Ireland, within the next 12 months. Dr. Govern is now spearheading plans to make this proposal a reality.

Many CIT staff members pulled together to ensure the success of this exciting activity, including Christine Bolling, Leo Ayeomonche, Linda Myles, and the entire CIT administrative office staff—Kevin Dols, Brian Coats, Jim Brunetti, John Pfeifer, Anthony Iano-Fletcher, and Michael Steele.

institutions and the DCS will include consultation through the NIH-developed TELESYNERGY™ Medical Consultation WorkStation; access and entry into the NCI Clinical Trials Information System; collaboration with NCI-trained

ease- or modality-specific services; assistance to Partners in developing educational seminars and other educational experiences throughout the year; and providing NCI patient education materials.

PEOPLE

Rosenberg Celebrates 25th Anniversary at NCI

Much like a proud father, Steven A. Rosenberg, M.D., Ph.D., has adorned his office walls with the photos of the more than 100 fel-

lowers whom he has trained in his long, esteemed tenure at the National Cancer Institute.

A closer look reveals the framed photo of Dr. Rosenberg and his wife with former President and Mrs. Reagan at a state dinner in 1986; a photo of Dr. Rosenberg and former President Jimmy Carter, whose brother, Billy, he treated for pancreatic cancer, and still another snapshot of the first patient he cured of advanced metastatic cancer.

For 25 years, Dr. Rosenberg has overseen the groundbreaking work of the NCI Surgery Branch as Branch Chief. On August 27, 1999, his colleagues, students, and friends celebrated his tenure at a full-day symposium reviewing the scientific strides he has made in his more than two decades at NCI.

"It was a wonderful day," said Dr. Rosenberg. "It was particularly moving for me to hear some of the fellows I'd trained recount how our work and joint efforts had helped reaffirm their commitment to cancer research. I'm very proud of all the students that have come through our branch. Many of them have taken prominent roles at leading institutions throughout the world."

Dr. Rosenberg joined the NCI as Surgery Branch Chief in 1974 and combined his training in two diverse fields (surgery and immunology) to pioneer one of the most promising developments in cancer treatment. He drew world attention when he conducted the first authorized gene transplant in humans and discovered the first effective immunotherapy approved for clinical use. More recently, he and his team have cloned the genes encoding cancer regression antigens and have used them to develop cancer vaccines now being used to treat patients with metastatic melanoma.

"Dr. Rosenberg has had a tremendous impact on the National Cancer Institute," says DCS Director Edison Liu, M.D. "His scientific contributions have enabled the research community to make bold progress in immunotherapies and opened the door to new, promising opportunities with gene therapy."

He has written or coauthored seven books, including the widely used textbook, *Cancer: Principles and Practice of Oncology*; his acclaimed narrative, *The Transformed Cell*; and more than 720 articles, papers, and book chapters on cancer or immunology. His work has been recognized with such prestigious awards as the John Wayne Award for Clinical Research; two Armand Hammer Cancer prizes; the Surgeon



Steven A. Rosenberg, M.D., Ph.D.

lowers whom he has trained in his long, esteemed tenure at the National Cancer Institute.

A closer look reveals the framed photo of Dr. Rosenberg and his wife with former President and Mrs. Reagan at a state dinner in 1986; a photo of Dr.

General's Exemplary Service Medal; the Claude Jacquillat Award for "Outstanding Accomplishments in Cancer Research;" the Karnofsky Prize, the highest honor awarded by the American Society of Clinical Oncology; and the Ellis Island Medal of Honor.

A New York native, Dr. Rosenberg received his bachelor's and medical degrees from Johns Hopkins University in 1961 and 1963, respectively, and a Ph.D. in biophysics from Harvard University in 1968. He completed his residency training in surgery in 1974 at the Peter Bent Brigham Hospital in Boston. He also serves as professor of surgery at the Uniformed Services University of the Health Sciences and at the George Washington University.

Dr. Rosenberg, his wife, Alice, and their three daughters (the youngest aged 18), enjoy their "family" time. "I don't have many hobbies," says Dr. Rosenberg. "I work and spend time with my family. There have been probably only 10 days in the last 25 years when I have been in town and not come to the NIH." ■

Blauvelt Awarded Outstanding Service Medal

Andrew Blauvelt, M.D., tenure-track senior investigator in the Dermatology Branch, was recently awarded the Outstanding Service Medal. NIH Director Harold Varmus, M.D., recognized Dr. Blauvelt as a commissioned corps officer who had demonstrated "sustained leadership of a laboratory and clinically based research program that has enhanced our understanding of the role of the skin in HIV disease."

Currently, Dr. Blauvelt is the only dermatologist heading an AIDS laboratory in the world. His primary research focuses on how HIV interacts with Langerhans cells at skin and mucosal surfaces and how these cells transmit the virus to T cells in the body.

Dr. Blauvelt began his NCI career in 1992 as a postdoctoral fellow in the Dermatology Branch, trained an additional year in the Laboratory of Molecular Microbiology in the National Institute for Allergy and Infectious Diseases, and then returned to the Dermatology Branch as an investigator in 1996. In addition to his work on Langerhans cells and HIV, he currently is overseeing a variety of laboratory studies



Andrew Blauvelt, M.D.

examining the role of human herpes virus 8 in the pathogenesis of Kaposi's sarcoma. Dr. Blauvelt also is principal investigator of a clinical study assessing the effectiveness of Interleukin-10 for patients with psoriasis and was recently awarded an NCI Division of Clinical Sciences Intramural Research Award to complete this study. In addition, he was recognized for his research with the 1996 American Academy of Dermatology Young Investigator in Dermatology Award. ■

NEW EMPLOYEES

Giovanna Tosato, M.D., has been appointed a senior investigator in the Medicine Branch, Department of Experimental Transplantation. Previously, Dr. Tosato served as director of the Division of Hematologic Products, Center for Biologics Evaluation and Research, Food and Drug Administration. Her research experience includes angiogenesis, regulation of tumor growth by targeting tumor blood vessels, Epstein-Barr virus/B-cell immortalization, and immunity to Epstein-Barr virus infections. Before assuming her positions at the FDA, Dr. Tosato served in the Metabolism Branch and early on in the Pediatric and Medicine Oncology Branches. A native of Rome, Italy, Dr. Tosato received her medical degree from the University of Rome "La Sapienza."

Peter D. Aplan, M.D., has been appointed a tenure-track principal investigator. His research interests revolve around investigating the causes of human malignancy at a molecular level, and applying the information learned regarding these causes to improving cancer detection, classification, and treatment. His research program uses the tools of molecular biology and molecular genetics to investigate causes of human cancer, specifi-

cally leukemia. These tools include cytogenetics, molecular genetics, and animal models of human malignancy. Previously, Dr. Aplan served as associate professor of pediatrics, microbiology and immunology at the Roswell Park Cancer Institute in Buffalo, New York. He also completed fellowships with NIH's Pediatric Hematology/Oncology Branch and was recently awarded the 1997–2002 Leukemia Society of America Scholar Award.

Bishop Selected Guest Lecturer for Project LEAD

Michael Bishop, M.D., clinical head of the Department of Experimental Transplantation, was a guest faculty member for the National Breast Cancer Coalition's (NBCC) Project LEAD seminar, November 3–7, 1999, in Atlanta, Georgia. Breast cancer advocates from across the country attended this seminar to gain knowledge about the latest cancer research and policy initiatives to enable them to participate on significant policy and advocacy boards and committees. Dr. Bishop, along with other renowned scientists, shared his expertise through lecture, group

study, and critical appraisal of scientific articles and research proposals.

"Advocates play an important role in increasing awareness about cancer research," said Dr. Bishop. "I think this program will create more opportunities for open dialogue and an exchange of ideas and efforts between the scientific and advocacy communities."

Since the 1995 inception of the program, Project LEAD graduates have gone on to serve on influential research boards and committees in Federal and State government, universities, hospitals, and private industry.

The National Breast Cancer Coalition is a grassroots advocacy group of more than 500 organizations and 60,000 individuals. Its focus is on advancing research, increasing access to quality treatment and care, and increasing the influence of breast cancer advocates in the decision-making process. ■

Nurses Participate in Continuing Education

DCS research nurses and data managers recently participated in a 3-day continuing education seminar series on the "Fundamentals of Clinical Trials." The seminars were held on three consecutive Fridays in October, 1999, from 8:00 a.m. to 4:30 p.m. Each day was chock full of speakers from inside and outside the DCS.

The focus of this pilot activity was to provide continuing education to research nurses and data managers on the various components of NCI intramural clinical trials. Research nurses in the NCI have diverse backgrounds and specialties within the oncology field, and their duties encompass a broad range from patient care to protocol development and analysis. The need to communicate information about the many overlapping roles and responsibilities of the different DCS Branch nurses is essential to developing a high-quality standard of clinical trial implementation, from concept through publication.

Participants attending the entire series were awarded 17 continuing education units from the Maryland Nurses Association. Because the program was offered for the first time, invitees were limited to DCS research nurses and data managers but open to clinical fellows. Clinical fel-

lows are important members of the multidisciplinary research team and have direct involvement with patient care and clinical trial progression.

The series covered a variety of topics within the clinical trials arena, from bioethical issues in clinical trials to protocol design and development to the role of the FDA. Speakers included representatives from the DCS, NCI, FDA, Matthews Media Group, Inc., Janssen Research Foundation, and the U.S. Public Health Service.

Anticipating a successful pilot educational program for internal staff, Patricia Davis, R.N., series coordinator, is anxious to conduct this program for nurses at surrounding hospitals in the area.

"This series of talks serves to standardize the operation of clinical trials and research practices among clinical nurses in the cancer trials field," says Ms. Davis. Ms. Davis and 12 of her colleagues worked for more than a year to prepare for this educational program, conducting a needs assessment, designing the concept, finalizing topics, securing speakers, and gathering materials for distribution to attendees.

According to DCS Director Edison Liu, M.D., one of

the goals for expansion of this pilot series is to tie it to the NCI All Ireland Cancer partnership. "With nurse exchange as one of the principal initiatives of the partnership, offering the seminar to visiting Irish nurses would greatly enhance the infrastructure and operation of clinical studies in Ireland," says Dr. Liu.

For more information about the continuing education program, contact Patricia Davis at (301) 402-7750. ■

DCS Web Site Adopts New Design

Coming soon to your DCS Web site: a brand new look and pages of new information for patients, health care professionals, the general public, and the installation of an intranet for DCS employees.

The DCS Web site is currently under construction and should be accessible to the public and employees within the next few months. Major sub-links will include DCS Home, DCS Research, Clinical Trials, and News and Events. The new homepage presents a more "public" face to the Division rather than the "institutional" one it previously had. It will also highlight major advances in the Division and list upcoming events.

continued on page 12

NCI Clinical Studies Support Center Celebrates Two Years of Patient Recruitment

After only 2 short years in operation, the NCI Clinical Studies Support Center (CSSC) has streamlined the intramural system of patient recruitment. From its inception in 1998, call volume to the toll-free telephone line has increased steadily.

"With their efforts supplementing NCI's traditional enrollment process, the number of patients on trial has increased," says Gregory Curt, M.D., clinical director, DCS. "The CSSC team also has done a commendable job of expediting the referral process."

The CSSC provides information about NCI's intramural clinical trials to physicians, patients, and the general public. Third quarter numbers from 1998 and 1999 show an increase of 122 percent in total calls received by the CSSC for those months, from 950 calls in 1998 to 2,107 calls in 1999. From January through September 1999, the CSSC fielded 5,800 calls

and facilitated the enrollment of 100 patients onto intramural clinical trials.

Patients and concerned family members call the CSSC and speak with a knowledgeable team of information specialists, which includes an oncology nurse. In a continued effort to enhance service to special populations, a Spanish-speaking information specialist joined the group this year.

"NCI is committed to the inclusion of minorities in clinical research," says Dr. Curt. "We continue to develop programs and outreach efforts to recruit members of all groups into our clinical studies."

The CSSC team notes caller disease and treatment histories and matches them to existing intramural clinical trials. The team is often able to prescreen potential participants and forward likely candidates to the principal investigator's office.

The primary goal of the CSSC team is to facilitate participation by not only serving as an accessible information resource, but also by increasing awareness among the physician and health care advocacy communities. To this end, materials promoting the CSSC and the NCI's intramural clinical trial program are disseminated regularly. Other custom services available to principal investigators include writing and designing promotional materials, drafting letters to physicians, developing and placing advertisements, and producing Web pages. Researchers who need promotional assistance for their clinical trials should contact Outreach Coordinator Deb Pearson, R.N., B.S.N., at 301-435-7854. ■

DCS WEBSITE
continued from page 11

The linkable sections in the left-hand navigation bars will allow users to find the information they need more quickly and easily. For example, potential fellowship candidates will be able to locate information on training opportunities, patients will be able to find appropriate clinical trials, and employees will be able to access administrative news and events—all with one click of their mouse.

DCS Branches also will be affected by the new change. Branches that currently have existing sites will be able to maintain the information for posting and will work with the DCS Webmaster, Amy DeFalco, to adopt the new design. Branches that do not have a site will be able to develop one with Ms. DeFalco.

For more information about the new Web site, contact Amy DeFalco at (301) 435-4489. ■

Translations

is published by the
National Cancer
Institute, Division of
Clinical Sciences

FOR INFORMATION, CONTACT TRANSLATIONS AT:

The Division of Clinical Sciences
National Cancer Institute
Building 31, Room 3A11, 31 Center Drive, MSC 2440
Bethesda, MD 20892-2440
Telephone: 301-496-3251
Fax: 301-480-0313
E-mail address: liue@dcdbc31.nci.nih.gov